

REMARKS

[0001] Applicant's attorney respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-7, 10-30, and 32-35 are presently pending. Claims 1, 4, 10, 11, 14, 16, 20, 22, 24, 27, 32, 33, and 35 are amended herein.

Formal Request for an Interview

[0002] If the Examiner's reply to this communication is anything other than allowance of all pending claims, then I formally request an interview with the Examiner. I encourage the Examiner to call me—the undersigned representative for the Applicant—so that we can talk about this matter so as to resolve any outstanding issues quickly and efficiently over the phone.

[0003] Please contact me to schedule a date and time for a telephone interview that is most convenient for both of us. While email works great for me, I welcome your call as well. My contact information may be found on the last page of this response.

Substantive Matters

Claim Rejections under § 102 and § 103

[0004] The Examiner rejects claims 1-7, 10-23, 27, 28, 30, 32, and 33 under § 102. For the reasons set forth below, the Examiner has not shown that the cited reference anticipates the rejected claims.

[0005] In addition, the Examiner rejects claims 24-26, 29, 34, and 35 under § 103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

[0006] Accordingly, Applicant's attorney respectfully requests that the § 102 and § 103 rejections be withdrawn and the case be passed along to issuance.

[0007] The Examiner's rejections are based upon the following reference:

- **US Patent No. 6,233,715 to Kuki et al:** "*Kuki et al*" hereinafter, (issued May 15, 2001).

Anticipation Rejections

[0008] Applicant's attorney submits that the anticipation rejections are not valid because, for each rejected claim, no single reference discloses each and every element of that rejected claim.¹ Furthermore, the elements disclosed in the single reference are not arranged in the manner recited by each rejected claim.²

Based upon *Kuki et al*

[0009] The Examiner rejects claims 1-7, 10-23, 27, 28, 30, 32, and 33 under 35 U.S.C. § 102(e) as being anticipated by *Kuki et al*. Applicant's attorney respectfully traverses the rejection of these claims. Based on the reasons given below, Applicant's attorney asks the Examiner to withdraw the rejection of these claims.

Independent Claim 1 and 4

[0010] Applicant's attorney submits that *Kuki et al* does not anticipate these claims because it does not disclose all of the elements as recited in these claims. In specific, claim 1, as amended, recites a first group of at least six consecutive bits, the first group having first and second separate portions and representing one of a logic 1 and a logic 0, the bits in the first portion each having a first state

¹ "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); also see MPEP §2131.

² See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

and the bits in the second portion each having a second state; and a second group of at least six consecutive bits separate from the first group and each having the first state.

[0011] For example, referring to FIG. 5 and paragraphs 25-29 of the patent application, in an embodiment, a first group of consecutive bits **50c-50d** has first portion **50c** and second separate portion **50d** and represents a logical 1. The bits in the first portion **50c** each have a first state (logic 0) and the bits in the second portion **50d** each have a second state (logic 1). A second group of consecutive bits **50e-50f** is separate from the first group **50c-50d** and each has the first state (logic 0). The second group **50e-50f** represents only a logical 0. Although shown as a grouping of four bits in the example of paragraphs 25-28, paragraph 29 and Table II discuss an implementation of six bits per grouping.

[0012] In contrast, *Kuki et al* does not disclose a first group of at least six consecutive bits having first and second separate portions and representing only either a logic 1 and a logic 0, wherein the bits in the first portion each has a first state and the bits in the second portion each has a second state, and a second group of at least six consecutive bits separate from the first group and each having the first state, wherein the second group represents only the other of the logic 1 and the logic 0. While lowering the density of data stored on the storage disk, first and second portions as recited enable the stored data to be more reliably detected. The only disclosure throughout *Kuki et al* is with reference to a $\frac{1}{4}$ code, i.e., four-bit groupings. In fact the cited and applied sections of *Kuki et al* teach a first group of four consecutive bits and a second group of four consecutive bits all having a same state.

[0013] Claim 4 recites language that is at least similar to claim 1 and is therefore allowable for at least similar reasons as discussed above.

[0014] Consequently, *Kuki et al* does not disclose all of the elements and features of these claims. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of these claims.

Dependent Claims 2-3 and 5-7

[0015] These claims ultimately depend upon either independent claim 1 or independent claim 4. As discussed above, claims 1 and 4 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claims 10 and 11, 14, 16, 32, and 33

[0016] Applicant's attorney submits that *Kuki et al* does not anticipate these claims for at least similar reasons as discussed above with respect to claim 1. Consequently, *Kuki et al* does not disclose all of the elements and features of these claims. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of these claims.

Dependent Claims 12-13, 15, and 17-19

[0017] These claims ultimately depend upon one of independent claim 11, independent claim 14 or independent claim 16. As discussed above, these

claims are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claims 20 and 27

[0018] Applicant's attorney submits that *Kuki et al* does not anticipate these claims for at least similar reasons as discussed above with respect to claim 1. Consequently, *Kuki et al* does not disclose all of the elements and features of these claims. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of these claims.

Dependent Claims 21-23, 28, and 30

[0019] These claims ultimately depend upon either independent claim 20, or independent claim 27. As discussed above, these claims are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Obviousness Rejections

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

[0020] Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a *prima facie* case have not been met. To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art¹ and "all words in a claim must be considered in judging the patentability of that claim against the prior art."² Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection.³ Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible.⁴

Based upon *Kuki et al*

[0021] The Examiner rejects claims 24-26, 29, 34, and 35 under 35 U.S.C. § 103(a) as being unpatentable over *Kuki et al*. Applicant's attorney respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

¹ *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)

² *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)

³ *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997)

⁴ See MPEP § 2143.01

Independent Claim 24

[0022] Applicant's attorney submits that the combination of *Kuki et al* does not teach or suggest all of the elements as recited in this claim. In specific, claim 24, as amended, recites coding a first logical bit of servo data and only the first logical bit as a first group of eight consecutive bits each having a first logic level, the first logical bit representing the first or a second logic level; and coding a second logical bit of servo data as a second group of eight consecutive bits respectively having the first logic level, the first logic level, the second logic level, and the second logic level, the second logical bit representing the first logic level if the first logical bit represents the second logic level, the second logical bit representing the second logic level if the first logical bit represents the first logic level.

[0023] For example, referring to FIG. 5 and paragraphs 25-29 of the patent application, in an embodiment, a first group of consecutive bits **50c-50d** has first portion **50c** and second separate portion **50d** and represents a logical 1. The bits in the first portion **50c** each have a first state (logic 0) and the bits in the second portion **50d** each have a second state (logic 1). A second group of consecutive bits **50e-50f** is separate from the first group **50c-50d** and each has the first state (logic 0). The second group **50e-50f** represents only a logical 0. Although shown as a grouping of four bits in the example of paragraphs 25-28, paragraph 29 discusses an implementation of eight bits per grouping.

[0024] In contrast, *Kuki et al* does not teach or even suggest a first group of at least eight consecutive bits having first and second separate portions and

representing only either a logic 1 and a logic 0, wherein the bits in the first portion each has a first state and the bits in the second portion each has a second state, and a second group of at least eight consecutive bits separate from the first group and each having the first state, wherein the second group represents only the other of the logic 1 and the logic 0. The only disclosure throughout *Kuki et al* is with reference to a $\frac{1}{4}$ code, i.e., four-bit groupings. In fact the cited and applied sections of *Kuki et al* teach a first group of four consecutive bits and a second group of four consecutive bits all having a same state.

[0025] Moreover, Applicant's attorney submits that the Examiner is using hindsight reasoning. As a matter of law, obviousness may not be established using hindsight obtained in view of the teachings or suggestions of the applicants.¹ To guard against the use of such impermissible hindsight, obviousness needs to be determined by ascertaining whether the applicable prior art contains any suggestion or motivation for making the modifications in the design of the prior art article in order to produce the claimed design. The mere possibility that a prior art teaching could be modified or combined such that its use would lead to the particular limitations recited in a claim does not make the recited limitation obvious, unless the prior art suggests the desirability of such a modification.²

¹ *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

² See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

[0026] As shown above, *Kuki et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 25-26

[0027] These claims ultimately depend upon independent claim 24. As discussed above, claim 24 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Conclusion

[0028] All pending claims are in condition for allowance. Applicant's attorney respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me at your convenience.

[0029] Any additional fees required as a result of this amendment have been paid from the below-referenced deposit account as filed herewith. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully Submitted,

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